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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,727	08/17/2006	Ulrich Riegel	29827/42263	9526

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EXAMINER	
TAYLOR II, JAMES W	
ART UNIT	PAPER NUMBER
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,727	RIEGEL ET AL.	
	Examiner	Art Unit	
	James W. Taylor II	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 23-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 23-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. All outstanding objections and rejections except for those explicitly maintained below are withdrawn in light of applicant's amendment filed on 12/29/2008.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior action.

3. New grounds of rejection below are necessitated by applicant's amendment. Specifically, applicant has amended claim 1 to necessitate that the dendritic polymer and phosphate is on the surface of a hydrogel-forming polymer particles. This constitutes a change in scope. As such, this action is properly made final.

Support for Amendments

4. The present specification gives support for the amendments to claim 1 in example 5 (pp. 19-21) and on page 6 (ll. 3-9). As such, no new matter has been added.

Double Patenting

5. The provisional rejection of claims 1-6 on the ground of nonstatutory obviousness-type double patenting over copending Application No. 11/089276 made of record in the office action mailed 9/4/2008 is hereby withdrawn without prejudice. Specifically, the copending application is presently abandoned.

Claim Rejections - 35 USC § 103

6. Claims 1, 3-9, 12-13, 16-17, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman *et alli* (US 5,562,646) in view of Allen (US 5,786,429) as evidenced by Dvornic *et alli* (US 5,739,218) in view of Kobayashi (US 5,489,469).

7. Goldman discloses an absorbent core (fig. 1) for collection of body liquids (i.e., a diaper), said core comprising particles (c. 10, l. 55) of a swellable hydrogel forming polymer (c. 9, ll. 23 and 28) and further comprising particles of at least one hydrophilic polymer (c. 23, l. 67).

8. Goldman fails to disclose the dendritic polymer or the water-insoluble phosphate on the surface of the absorbent core.

9. Allen teaches particles of a hydrophilic polymer with dendritic structure (fig. 1) which hydrophilic on their surface. This is evidenced by Dvornic, which teaches that polyamidoamine and poly(propyleneimine) are well-known hydrophilic dendrimers (c. 2, ll. 22-23). Thus, given that absorbent cores used in the collection of body liquids typically have cellulosics and fibrous webs and given that Allen have particular utility as wet and dry strength agents and adhesive for cellulosics and fibrous webs (c. 10, ll. 30-56), one of ordinary skill in the art would have motivation to use Allen's dendritic polymers on the surface of Goldman as the at least one hydrophilic polymer.

10. Goldman in view of Allen fails to teach the surface coating of water-insoluble phosphates.

11. Kobayashi teaches the use of a water-insoluble phosphate in absorbent members comprising swellable and hydrophilic polymers (c. 2, ll. 10-62). Further, one

of ordinary skill in the art would have motivation to incorporate said phosphates in to Goldman in view of Allen because the phosphates improves the capacity, rate, and power of absorbing liquids, such as urine and bodily discharge (c. 1, ll. 55-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to do so.

12. Regarding claim 3, the proposed combination above teaches using Allen's dendritic polymer, which can be polyamidoamine.

13. Regarding claim 4, Kobayashi teaches using calcium phosphate (c. 2, l. 62).

14. Regarding claim 5, Goldman teaches the hydrogel forming polymer is in powder form (c. 10, ll. 55-57).

15. Regarding claim 6, Kobayashi teaches that additives provide improved absorbency characteristics, such as capacity, rate, and power of absorbance (c. 2, ll. 4-7). As such, it would have been obvious to one having ordinary skill in the art at the time of the invention to add these additives to Goldman in order to achieve these results. Such additives are *inter alia* barium phosphate (i.e., metallic salt) or diatomaceous earth (c. 2, ll. 57-67).

16. Regarding claim 7, it would have been obvious at the time of the invention to add microspheres in a diaper to lower the density of absorbent phase, and thereby make the diaper lighter. Further, the thickness of the wall relative to the diameter of the diaper would be expected to control the strength and, inversely, the density. As such, the thickness is a result effective variable. Optimization of result effective variables through

routine experimentation is not a patentable distinction. See *In re Beosch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and MPEP 2144.05 (II) (B).

17. Regarding claims 8-9 and 11-12, the particle size of the particles is most preferred as 100 to 800 microns (c. 11, l. 29).

18. Regarding claims 14-15, Regarding the other physical properties, the courts have stated that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical or substantially identical chemical structure and/or composition, the physical properties Applicant discloses and/or claims are necessarily present. See *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established." *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). Further, if it is the applicant's position that this would not be the case, factual evidence would need to be provided to support the applicant's position.

19. Regarding the claim 16, Goldman teaches a saline flow conductivity of at least 80 x 10^{-7} cm^3 g^{-1} (tbls. 2 and 3; cc. 22 and 24).

20. Regarding the claim 17, Goldman teaches a saline flow conductivity of at least 80 x 10^{-7} cm^3 g^{-1} (tbls. 2 and 3; cc. 22 and 24). The claimed range would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that claiming an over lapping portion of the range taught in the prior is a

prima facie case of obviousness. See *In re Malagari,* 182 USPQ 549 and MPEP 2144.05 (I).

21. Regarding claim 23, Goldman teaches partially neutralized polyacrylic acid is among the most preferred polymer materials (c. 10, ll. 32-45).

22. Regarding claim 24, Goldman teaches that surface crosslinking is a preferred process (c. 18, ll. 20-36).

23. Regarding claim 25, the combination of reference is silent with respect to the amount of dendritic polymer on the surface of the absorbent core. However, given that various benefits of the dendritic polymer above, the amount of the dendritic polymer on the surface of the core is a result effective variable. Optimization of result effective variables through routine experimentation is not a patentable distinction. See *In re Beosch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and MPEP 2144.05 (II) (B).

24. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman *et alli* (US 5,562,646) in view of Allen (US 5,786,429) as evidenced by Dvornic *et alli* (US 5,739,218) in view of Kobayashi *et alli* (US 5,489,469) as applied to claims 1, 3-9, 12-13, 16-17, and 23-25 above, further in view of Sorensen *et alli* (US 6093777).

25. Goldman in view of Allen in view of Kobayashi fail to teach the claimed reaction product.

26. Sorensen teaches a dendritic polyester macromolecule in a thermosetting resin matrix (ti.). One example of which can be found as example 1, which is the reaction product of 2,2-dimethylolpropionic acid and a polyol (cc. 13-14). One of the beneficial

properties of using this reaction product is that the product is known to have a toughening affect (c. 6, ll. 17-44). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use this specific reaction product in Goldman in view of Allen in view of Kobayashi.

27. Claims 10-11 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman *et alli* (US 5,562,646) in view of Allen (US 5,786,429) as evidenced by Dvornic *et alli* (US 5,739,218) in view of Kobayashi *et alli* (US 5,489,469) as applied to claims 1, 3-9, 12-17, and 23-25 above, further in view of Heide (US 2004/0014901 A1).

28. Regarding the particle size, the particle size of the particles is most preferred as 100 to 800 microns (c. 11, l. 29). The claimed range would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that claiming an over lapping portion of the range taught in the prior is a *prima facie* case of obviousness. See *In re Malagari,* 182 USPQ 549 and MPEP 2144.05 (I).

29. Regarding the saline flow conductivity, Goldman teaches a saline flow conductivity of at least 80 x 10^{-7} cm^3 g^{-1} (tbls. 2 and 3; cc. 22 and 24).

30. Goldman in view of Allen in view of Kobayashi fails to teach the CRC or AUL values, presently claimed.

31. Heide shows a similar hydrogel composition with intended uses as a diaper (ab.; par. 2). The reference shows CRC values and AUL values that meets the limitations presently claimed (tbl. after par. 95). The reference serves to demonstrate that (i)

"higher" CRC and AUL values are generally desired for diapers as they measure absorption (par. 81-82), and (ii) achieving CRC and AUL values that meets the present limitations are currently within the state of the art (tbl.). One of ordinary skill in the art would believe that there is some correlation between the absorbance measurements (CRC and AUL) and the compositional nature of the polymer.

32. Further, the courts have stated that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical or substantially identical chemical structure and/or composition, the physical properties Applicant discloses and/or claims are necessarily present. See *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established." *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). If it is the applicant's position that this would not be the case, factual evidence would need to be provided to support the applicant's position.

Response to Arguments

33. Applicant's arguments filed 12/29/2008 regarding unexpected results (p. 13-14 of response) have been fully considered but they are not persuasive.

34. Although the table that applicant references (tbl. 1) does appear to have unexpected results, the unexpected results are not reasonably commensurate in scope with the present claims. Specifically, the table shows *one* base polymer (i.e., "ASAP

500 Z"; see 0. 19, l. 28) and *one* dendritic polymer (i.e., "Boltorn(R) H40"). As such, it is likely that the unexpected results are linked to either or both of these polymers.

35. Applicant's other arguments filed 12/29/2008 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

36. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

37. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Taylor II whose telephone number is

(571) 270-5457. The examiner can normally be reached on 7:30 am to 5:00 pm (off every other Friday).

39. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

40. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 1796

jwt2

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796